

# (12) United States Patent

**Everitt** 

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## (54) COOLING RESISTOR BANKS (75) Inventor: Alwyn John Everitt, Norfolk (GB) Assignee: Cressall Resistors Limited, Leicester (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days. (21) Appl. No.: 09/868,890 (22) PCT Filed: Oct. 18, 2000 (86) PCT No.: PCT/GB00/03978 § 371 (c)(1), (2), (4) Date: Jan. 23, 2002 (87) PCT Pub. No.: WO01/31660 PCT Pub. Date: May 3, 2001 (30)Foreign Application Priority Data (GB) ...... 9924903 (51) Int. Cl.<sup>7</sup> ...... H05K 7/20 338/58; 454/184; 188/264 F

(58) Field of Search ...... 188/264 R, 264 A,

188/264 F; 303/124; 338/51-53, 57, 58; 454/184; 165/80.3; 174/15.1, 16.1; 361/678,

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Primary Examiner—Gerald Tolin

(74) Attorney, Agent, or Firm-Haynes and Boone, LLP

# (57) ABSTRACT

Resistor bank cooling apparatus 1 has an enclosure 2 surrounding a resistor bank 4. At least one first vane 6 directs into the enclosure 2 air flowing past an open side 12 thereof, which open side 12 is not a side facing the direction from which the air flowing past the enclosure 2 flows. The resistor bank 4 has a resistor element 22 which functions as at least one airflow directing baffle. The or each first vane 6 and the or each baffle are each disposed thereby to create an air flow through the enclosure 2 which achieves a sufficiently even cooling of the resistor bank 4. At least one second vane 60 to the side of the or each first vane 6 remote from the open side 12 captures and deflects into the enclosure 2 air which bounces off' the closed facing sides.

### 17 Claims, 5 Drawing Sheets

